

**Commonwealth of Kentucky  
Division for Air Quality**

**PERMIT APPLICATION SUMMARY FORM**

Reviewed by: Philip T. Jarboe, P.E.

GENERAL INFORMATION:

Source Name:	Lubrizol Advanced Materials, Inc.
Mailing Address:	2468 Industrial Pkwy, P.O. Box 1498, Calvert City, Kentucky 42029
Date application received:	August 8, 2008
SIC/Source description:	2821, <i>Plastic Materials, Synthetic Resins, and Nonvulcanizable Elastomer</i>
Source ID #:	21-157-00060
Source A.I. #:	46166
Activity #:	APE20080001
Permit number:	F-05-051 R1

APPLICATION TYPE/PERMIT ACTIVITY:

<input type="checkbox"/> Initial issuance	<input type="checkbox"/> General permit
<input checked="" type="checkbox"/> Permit modification	<input checked="" type="checkbox"/> Conditional major
<input checked="" type="checkbox"/> Administrative	<input type="checkbox"/> Title V
<input type="checkbox"/> Minor	<input checked="" type="checkbox"/> Synthetic minor
<input type="checkbox"/> Significant	<input type="checkbox"/> Operating
<input type="checkbox"/> Permit renewal	<input type="checkbox"/> Construction/operating

COMPLIANCE SUMMARY:

<input type="checkbox"/> Source is out of compliance	<input type="checkbox"/> Compliance schedule included
<input checked="" type="checkbox"/> Compliance certification signed	

APPLICABLE REQUIREMENTS LIST:

<input type="checkbox"/> NSR	<input type="checkbox"/> NSPS	<input checked="" type="checkbox"/> SIP
<input type="checkbox"/> PSD	<input checked="" type="checkbox"/> NESHAPS	<input type="checkbox"/> Other
<input type="checkbox"/> Netted out of PSD/NSR	<input checked="" type="checkbox"/> Not major modification per 401 KAR 51:001, 1(116)(b)	

MISCELLANEOUS:

- ☐ Acid rain source
- ☐ Source subject to 112(r)
- ☒ Source applied for federally enforceable emissions cap
- ☐ Source provided terms for alternative operating scenarios
- ☐ Source subject to a MACT standard
- ☐ Source requested case-by-case 112(g) or (j) determination
- ☐ Application proposes new control technology
- ☒ Certified by responsible official
- ☐ Diagrams or drawings included
- ☐ Confidential business information (CBI) submitted in application
- ☐ Pollution Prevention Measures
- ☐ Area is non-attainment (list pollutants):

## EMISSIONS SUMMARY:

Pollutant	Actual (tpy) <sup>1</sup>	Potential (tpy)
PM/PM <sub>10</sub>	5.09	9.91
SO <sub>2</sub>	0.01	0.01
NO <sub>x</sub>	1.15 <sup>2</sup>	1.15
CO	0.68	0.96
VOC	3.16	< 90 <sup>3</sup>
Lead	--	--
Individual HAP > 10 tpy	None	< 9 <sup>3</sup>
Total HAPs > 25 tpy	N/A	< 22.5 <sup>3</sup>

1. Actual emissions are from the Kentucky Division for Air Quality's 2005 Emissions Inventory printout report.
2. The actual emissions of NO<sub>x</sub> in the Kentucky Division for Air Quality's 2005 Emissions Inventory printout report was greater than the calculated potential emissions; therefore the actual NO<sub>x</sub> emissions were set equal to the potential emissions.
3. Federally enforceable source emission limitations established in the permit.

### **F-05-051 R1:**

The following administrative revisions have been incorporated into the permit.

#### **Revision of the NESHAP operating plan, submitted November 20, 2006.**

The facility submitted a revised operating plan for Benzene Storage Vessels Closed Vent system. There were no changes to the permit.

#### **Application submitted June 4, 2007.**

1. Changed name of facility from Noveon, Inc. to Lubrizol Advanced Materials, Inc.
2. Deleted insignificant activities numbers:
  22. Initiator change tank (TK-6C) capacity 100 gal 401 KAR 63:020
  25. Dryer #6 packaging filter (BL-102) capacity: N/A 401 KAR 59:010
  26. Dryer #7 packaging filter (BL-101) capacity: N/A 401 KAR 59:010
  27. Dryer #8 filter (BL-1PA) capacity: N/A 401 KAR 59:010
  28. Dryer #9 packaging filter (BL-2PA) capacity: N/A 401 KAR 59:010
  29. Dryers #8, 10 packaging filter (BL-3PA) capacity: N/A 401 KAR 59:010
  30. Dryers #9, 10 filter (BL-4PA) capacity: N/A 401 KAR 59:010
  39. Vacuum Jets (VJ-39H/40H) capacity: N/A 401 KAR 59:010

Added insignificant activities numbers:

- |     |  |                |
|-----|--|----------------|
| 75. | Filter (BL-26H) for dryers #6-10 & packaging lines Capacity: N/A | 401 KAR 59:010 |
| 76. | PTZ shot storage tank (TK-6C)<br>Capacity: 37 gal                | 401 KAR 63:020 |
| 77. | Vacuum Blower (CM-5H)  | 401 KAR 59:010 |

**Application submitted August 8, 2008.**

Added insignificant activities number:

78. Tank cleanout into drums

**SOURCE DESCRIPTION:**

Lubrizol Advanced Materials, Inc has accepted permit conditions to limit the facility's potential to emit (PTE) below the major source threshold, and the source is classified as a "nonmajor source" pursuant to 401 KAR 52 and 40 CFR 70. Therefore, the source is subject to the provision of 401 KAR 52:030. Inclusive of the emission and operating caps described below, the facility qualifies as a conditional major/synthetic minor emission source by use of control devices to limit emissions.

**EMISSION AND OPERATING CAPS DESCRIPTION:**

Marshall County is designated as attainment for all criteria pollutants. To preclude the applicability of 401 KAR 51:017, *Prevention of Significant Deterioration of Air Quality*, and 401 KAR 52:020, *Title V Permits*, the following sourcewide emission limits shall apply:

- i. Volatile organic compound (VOC) emissions: 90 tons per year;
- ii. Combined hazardous air pollutant (HAP) emissions: 22.5 tons per year; and
- iii. Single hazardous air pollutants (HAPs) emissions: 9 tons per year.

In order to make the conditional major/synthetic minor emission limits enforceable as a practical matter, Lubrizol Advanced Materials, Inc. has voluntarily accepted limits of Carbopol<sup>®</sup> production in any twelve (12) consecutive month period as follows:

- i. Carbopol<sup>®</sup> using benzene as the carrier: 14,000,000 lbs per year;
- ii. Carbopol<sup>®</sup> using ethyl acetate as the carrier: 12,000,000 lbs per year; and
- iii. Carbopol<sup>®</sup> using the cosolvent as the carrier: 22,556,000 lbs per year.

**OPERATIONAL FLEXIBILITY:**

There were no alternative operating scenarios proposed by the source; however, alternate operating scenarios are included in the permit based on applicable requirements in 40 CFR Part 61 regulations.